Please cancel rejected Claims 1-3, 5-15, 17-22, and 24-27, wherefore the only claims that remain in the application are allowed Claims 4, 16 and 23.

1. - 3. (Cancelled)

4.   (Previously Presented) An image processing method for detecting a direction of an image including a character area, inputted into a computer, said method comprising:

a binary image generation step of generating a binary image of said input image;

a tile image generation step of generating a tile image that comprises a plurality of tiles, wherein a value of each tile in the tile image is generated based on a predetermined size area in said binary image;

a character area extraction step of extracting an area in said binary image, corresponding to an area in a circumscribed rectangle surrounding connected pixels having the same value in said tile image, as a character area;

a determination step of determining whether or not said character area is an inverted image based on the binary image of said image;

an inversion processing step of inverting black and white components of said binary image if it is determined at said determination step that said character area is an inverted image; and

a direction detection step of recognizing a direction of characters included in said character area of the binary image inverted in said inversion processing step, and thereby detecting the direction of said image.

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5. - 15.   (Cancelled)

16.   (Previously Presented) An image processing apparatus for detecting a direction of an image including a character area, inputted into a computer, said apparatus comprising:

binary image generation means for generating a binary image of said input image;

tile image generation means for generating a tile image that comprises a plurality of tiles, wherein a value of each tile in the tile image is generated based on a predetermined size area in said binary image;

character area extraction means for extracting an area in said binary image, corresponding to an area in a circumscribed rectangle surrounding connected pixels having the same value in said tile image, as a character area;

determination means for determining whether or not said character area is an inverted image based on the binary image of said image;

inversion processing means for inverting black and white components of said binary image if said determination means determines that said character area is an inverted image; and

direction detection means for recognizing a direction of characters included in said character area of the binary image inverted in said inversion processing means, and thereby detecting the direction of said image.

17. - 22.   (Cancelled)

23.   (Previously Presented) A program for a computer to execute:

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a binary image generation procedure of generating a binary image of an input image including a character area;

a tile image generation procedure of generating a tile image that comprises a plurality of tiles, wherein a value of each tile in the tile image is generated based on a predetermined size area in said binary image;

a character area extraction procedure of extracting an area in said binary image, corresponding to an area in a circumscribed rectangle surrounding connected pixels having the same value in said tile image, as a character area;

a determination procedure of determining whether or not said character area is an inverted image based on the binary image of said image;

an inversion processing procedure of inverting black and white components of said binary image if it is determined at said determination procedure that said character area is an inverted image; and

a direction detection procedure of recognizing a direction of characters included in said character area of the binary image inverted in said inversion processing procedure, and thereby detecting the direction of said image.

24. - 27.   (Cancelled)